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BOOK OF ABSTRACTS

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I10. Industrial and Food Microbiology and Biotechnology

P384. Disinfectants efficiency against *Salmonella* spp. biofilms on stainless steel surface

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Salmonella spp. is a major cause of foodborne illness around the world. Its ability to produce biofilms contributes to an increased resistance to disinfectants and inefficient disinfection of food processing environments. This may be a challenge to reduce the prevalence of these bacteria in the food chain and contributes to salmonellosis cases in the population. The aim of this study was to evaluate the efficiency of three disinfectants applied over a biofim produced by *Salmonella* spp. isolated from a slaughter house. Biofilms were produced on stainless steel slices incubated in meat broth inoculated with *Salmonella* spp. during 48h to let the surface be covered by a biofilm layer (1.1 x 108 UFC/cm2). The slices surfaces were washed with sterilized tap water and the disinfectants efficacy were analysed in accordance with EN 1276 European Standard for evaluation of bactericidal efficacy of disinfecting liquids, analysis were done in triplicate. Tested substances were: ethanol:isopropanol: benzilic alcohol (46:27:1) [D1], hidrogen peroxide [D2] and benzalkonium chloride (0.5 e 2%) [D3] and the neutralizants were: polysorbate 80 (30 g/L), lecitin (3 g/L), saponin (30 g/L) [N1] and thiosulfate (10 g/L), polysorbate (50 g/L) and lecitin (3 g/L) [N2] . The slices were dip in disinfectant D1 followed by neutralizing N1 during 1, 15, 30 and 60 minutes in each solution and washed again prior to swab, dilution and plate the samples on TSA-YE. The procedure was repeated to D2-N2 and D3-N1. The results evidence that after 1 minute the average rates reduction were 5.0 log to D1, 5.5 log to D3 (0.5%) and 5.8 to D3 (2%). It was not possible to observed microbial growth after 1 min in contact with D2 and to bacteria on biofim after 15, 30 and 60 minutes in contact with tested disinfectants. Once the tested concentration were those recommended by disinfectants producers, we can conclude that it is necessary to keep these products in contact with the surfaces at least 1 minute to reach an appropriate microbial reduction.